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State Conservationist

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Soil Conservation Service Reorganizes New State Headquarters at Huron

The Soil Conservation Service has moved their state headquarters to Huron, and have set up their office in the Federal building. Ross D. Davies, State Coordinator for the service since 1936 has been named State Conservationist and will be in charge of the administration of the state conservation program. Educational activities will continue to be handled by the Extension Soil Conservationist at the State College in Brookings.

Ernest Sandberg will act as assistant state conservationist. H. F. Tagge, formerly area conservationist at Rapid City has been named assistant state conservationist at Lincoln, Nebraska. South Dakota has been divided into eight areas for more efficient operation of the soil conservation program. Each of these areas is in charge of a district conservationist. Location of these offices and the individuals in charge in this state are:

Alcester - - - Elvin C. Bjorklund
Huron - - - Carl T. Carlson
Hecla - - - Elmer J. Lund
Chamberlain - - H. Leo Wilson
Winner - - - Cecil W. Means
Faith - - - Leslie R. Albee
Rapid City - - Robert R. Hinde
Hot Springs - Virgil R. Weiser

The redistribution of soil conservation service personnel, effective July 1 and putting a larger proportion of the personnel into the field to assist soil conservation districts, is a long step forward in assisting the farmers to develop land use adjustment and soil and water conservation in South Dakota.

Nationally, the Washington office of the soil conservation service is reduced sharply and the number of regional organizations cut from ten to seven. Kansas is now grouped with South Dakota, North Dakota, Nebraska, Montana and Wyoming in the northern great plains region. Regional headquarters remain at Lincoln, Nebraska.

The work of the conservation service in assisting districts will continue and be enlarged upon and the policy of the service will be to reduce overhead and make technical men available to the field.

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Strip Cropping Popular in Brown-Marshall

That strip cropping is a conservation practice which has now apparently become a permanent part of the cropping system in the Brown-Marshall district, is evidenced by the fact that at least 80 per cent of all cropland having sandy soil surfaces is strip cropped.

Subsurface Tillage Now Timely Practice

It's about time to begin thinking about that subsurface tillage. There are now on the market a number of implements or attachments that can be used for thoroughly tilling the soil without burial of the residue. The working of the soil beneath these residues is known as subsurface tillage.

Certain advantages in soil and moisture conservation can be gained through leaving crop residue material on the surface of the soil, instead of plowing it under. These advantages are: (1) an increase in capacity of soil to absorb water (2) reduction of runoff (3) reduction of water erosion and wind erosion (4) reduction in rate of surface evaporation (5) snow holding and weed control.

The agronomic requirements for tillage beneath residues are that the soil shall be well tilled but not necessarily inverted, and practically all or nearly all residues shall be left on the surface. Only a minimum amount of the surface should be disturbed or trenched by the standards or shanks of the machine.

Subsurface tillage was introduced as a soil and moisture conservation practice, and measurements by Dr. F. L. Duley and Dr. J. C. Russell at the University of Nebraska College of Agriculture bear this out again this year.

A 2.62 inch rain, 1.6 rain falling in the first 20 minutes, this summer gave the most recent measurements on two parts of a sidehill cornfield.

Runoff from corn planted on ground where second year sweet clover had been plowed under lost more than half of the rain received and soil loss was at the rate of 12 tons per acre. From corn in the same field where second year sweet clover was subsurface tilled, run-off amounted to only one fifth of the rain received and soil loss was only 1.15 ton per acre.

Shelterbelt Project Transferred to SCS

The Soil Conservation Service took over the administration and supervision of the Shelterbelt Project on July 1. This program was formerly operated by the U.S. Forest Service. The work has been transferred from the one agency to the other "lock, stock and barrel." This consolidation will result in considerable saving since both agencies were formerly engaged in planting and establishing shelterbelts in the same areas.

A. L. Ford, who has been in charge of the U. S. Forest Service Shelterbelt Project in South Dakota since its inception in 1934, is now handling the same work for the soil conservation service.

Most of the former forest service shelterbelt personnel and much of the equipment has been transferred to the conservation service. The most essential of the technical practices and policies that have been largely responsible for past shelterbelt successes in the state are being retained by the soil conservation service.

During the past eight planting seasons, 3,225 miles of shelterbelts have been planted on more than 5,800 eastern South Dakota farms under the shelterbelt program. There have been only 69 miles of belt abandoned as failure. Although 69 miles of failed belts seem like quite a number, when that figure is compared with the total mileage, the failures are only 2 per cent. In other words, only one shelterbelt out of fifty has failed.

"For the duration," the policy of the soil conservation service will be to drastically reduce new plantings and major emphasis will be placed on maintaining and properly caring for the belts already established. Some replanting will be necessary and a systematic thinning program must be developed.

It has been pretty definitely decided that practically all the new planting

will be confined to soil conservation districts. In special cases, non-district plantings may be needed to finish farm shelterbelt patterns that have already been started but not completed.

Nine fieldmen formerly with the Forest Service have been added to the soil conservation staff in the state. For the most part, these men will be officed on soil conservation districts. They will also be charged with the proper care and maintenance of non-district shelterbelts that are adjacent to and within easy reach of the district headquarters.

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Dwight Recommends Conservation Week

When asked recently whether or not the state association should plan for a conservation week this year, E.B. Dwight, state chairman, replied:

"I believe a CONSERVATION WEEK for South Dakota is a good idea----especially this year. FOOD WILL WIN THE WAR. We cannot stress too much the erosion that has taken place in this dear old state this year. Hundreds of acres have been laid waste and good ground has literally flown down the rivers of the state, leaving us with a bit less land on which to farm. Our biggest job is education and toward that end, let's all pull together and eventually come out on top."

With a message like that, there is one thing you can depend on--we will go ahead and plan for conservation week, probably some time during September or October.

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Two new districts have been organized since the last issue of the Zephyr. This brings the total districts in the state to 29 and the total acreage in districts to well over 7 million acres. More than 20 per cent of the farmers and ranchers in the state are now living within the boundaries of soil conservation districts.

The new districts are the Turner and the West Beadle. The Turner district com-

prises a small area around Viborg and Centerville. The West Beadle district includes 13 townships around Wolsey and Wessington. Ballots are now being cast in the Perkins district which, if organized, will be district number 30.

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Wind Erosion Studies Conducted By Edgar Joy at Experiment Station

"A wind tunnel has been constructed to measure the effect of plant residues, crop rotations, tillage practices, and the surface condition created by different types of tillage upon soil erosion by wind, and to study relations which may exist between rate of soil blowing and certain physical properties of soil. A system of plots to create the various conditions were planted in the spring of 1941 and the wind tunnel tests were started in the fall.

Three types of tillage are used: plow, one-way, and subsurface. All three types of tillage are used on each of mowed stubble, 6-inch stubble, 12-inch stubble and combined stubble. After the corn and wheat stubbles are cut at the indicated heights, one type of tillage is performed on each separate set of the stubble plots. Later the wind tunnel is used.

During a two hour test, corn stubble lost over 3,300 pounds of soil per acre, sorghum stubble slightly less, subsurfaced, short cut grain stubble about 250 pounds and subsurfaced combined grain stubble about 50 pounds per acre.

A two-row subsurface cultivator has been developed with the S. D. State College Agricultural Engineering Department and is now in use at Chamberlain. Another two-row tractor mounted cultivator has given good results."

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As the result of the activities in the Pennington district this year, 1,083 acres of pasture or hayland have received the additional benefits of added water by means of spreading systems which means 1,000 additional tons of feed annually.

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

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Ross D. Davies, State Conservationist
Huron, South Dakota

Official Business

Grass Seed Harvested to Fill Army Needs

Before the war, the major portion of the seed harvested by the Soil Conservation Service had been used for regrassing in soil conservation districts and on government owned land. Now, however, the Army has a higher priority and a large portion of the seed harvested will be used to fill Army needs. The additional seed will help to supply grass seed needed for pasture and hay seedings to boost future production of wool, meat and dairy products. The Army has a high priority on crested wheatgrass seed now being harvested. The regrassing program calls for reseeding of a million acres of newly acquired lands in North Dakota, South Dakota, Nebraska, Kansas, Missouri, Colorado, and Wyoming.

In order to eliminate the dust at the newly constructed airports, army cantonments, air bases, and training fields, it is highly essential that the regrassing program be completed as quickly as possible.

Walter V. Kell, Liaison Officer for the Seventh Service Command (Army) at Omaha, stated that shipment of a vast number of planes is being delayed and in some cases held up because of dust that would get into airplane engines at the new air fields. Dust reduces the efficiency and life of each engine from thirty to sixty per cent or more, which amounts to an enormous sum of money in replacements. The only way the Army can eliminate this destruction of their planes is by regrassing the bare ground adjacent to airports and air bases. Nine million pounds of crested wheatgrass seed and other species of grass seed are needed to stop this blow dirt and other erosion. In South Dakota alone, seed will be needed to regrass the Rapid City and Sioux Falls air bases, Camp Rapid headquarters, the so-called satellite air fields at Watertown, Pierre, Philip and Huron, the Rapid City Cantonment, the Fort Meade camp near Sturgis, and other new stations not yet designated. Thus grass seeding conserves essential military bases and also improves their appearance.